

REMARKS/ARGUMENTS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 10-19 are currently pending in the application. No claim amendments are presented, thus no new matter is added.

In the Office Action, Claims 10-19 are rejected under 35 U.S.C. § 112, first paragraph; Claims 10-13 are rejected under 35 U.S.C. § 102(b) as anticipated by Wei et al. (U.S. Pub. 2003/0227875, herein Wei); and Claims 14-19 are rejected under 35 U.S.C. § 103(a) as unpatentable over Wei.

The Office Action rejects Claims 10-19 under 35 U.S.C. § 112, first paragraph, asserting that the features of Claims 10-13 fail both the enablement and written description requirements. Applicants respectfully traverse this rejection.

The Office Action asserts that the originally filed disclosure fails to provide adequate support for the features of “the terminal transmitting a request for resource assignment”, “terminal acquiring an initial value of a resource for data transmission”, “acquiring the initial value”, “resource data for retransmission is not remained”, and “regardless of whether the resource for data transmission is remained”.

However, none of the pending claims recite the above noted features quoted in the Office Action. As pointed out in the Office Action of September 12, 2008, and in the interview held on July 30, 2008, the claims were amended by way of a Supplemental Preliminary Amendment filed on July 3, 2008. The outstanding Office Action again appears to be rejecting the claims under 35 U.S.C. § 112, first paragraph, as they were presented prior to the Supplemental Preliminary Amendment.

Applicants respectfully submit that the features recited in Claims 10-13, as presently pending, are supported by the originally filed disclosure. Should such a rejection be

maintained in a subsequent Office Action, Applicants respectfully request that the rejection cite the specific portions of the claims, as presently pending, which are believed to lack support in the originally filed specification.

Moreover, the Office Action asserts that the features recited in Claims 16 and 19 have “not been found or described in the specification”.

Applicants respectfully traverse this assertion, and note that there is no *in haec verba* requirement, and claim limitations may be supported by the specification through ***express, implicit, or inherent*** disclosure.¹ Thus, the specification does not have to literally state the above noted phrases to support these claimed features. Moreover, a patent specification need only describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention.²

If a skilled artisan would have understood the inventor to be in possession of the claimed invention at the time of filing, even if every nuance of the claims is not explicitly described in the specification, then the adequate description requirement is met. See, e.g., *Vas-Cath*, 935 F.2d at 1563, 19 USPQ2d at 1116; *Martin v. Johnson*, 454 F.2d 746, 751, 172 USPQ 391, 395 (CCPA 1972) (stating “***the description need not be in ipsius verbis [i.e., “in the same words”] to be sufficient***”).

The analysis of whether new matter is added should be conducted from the standpoint of one of skill in the art. Generally, there is an inverse correlation between the level of skill and knowledge in the art and the specificity of disclosure required.³

Moreover, the MPEP states “[t]he fundamental inquiry is whether the specification conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, applicant was in possession of the invention as now claimed.”⁴

¹ MPEP §2163(I)(B).

² *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555 (Fed. Cir. 1991).

³ See, Page A-7 of the USPTO’s *Written Description Training Materials*, revision 1, March 25, 2008.

⁴ MPEP §2163(I)(B).

Claim 16 depends from Claim 11, and recites that the base station further includes “a scheduling unit configured to estimate a transmission time zone for retransmission data transmitted by the terminal” and “the first unit transmits information on the value of the resource for data transmission to another terminal that requests resource assignment from the base station, the information on the value of the resource for data transmission incorporating the estimated transmission time zone estimated by the scheduling unit”. Claim 19 recites similar features.

As disclosed at Fig. 5 and p. 11, l. 30 – p. 13, l. 23 of the specification, after the base station transmits a NAK signal to the terminal 1 it can predict a time zone during which an autonomous transmission is sent from the terminal 1. The base station then assigns transmission permission to any other terminal that transmits a transmission request signal to the base station, excluding the predicted (e.g. estimated) zone. Otherwise, if a transmission permitted time is assigned to the other terminal in the time from transmitting the NAK signal to the terminal 1 to receiving the retransmission data, the transmission from the terminal 1 and the transmission from the other terminal mutually interfere with each other, which may cause reception failure.

Therefore, a request receiving & scheduling unit 22 of the base station 2 delays the transmission permitted time assigned to the other terminal based on the prediction so as not to overlap the transmission time zone for the retransmission data. More specifically, in addition to a normal transmission rate and a transmission permitted time length, a transmission start time is further reported using an assignment signal (step S32). The transmission start time may be a relative time from reception of the assignment signal, or may be an absolute time that can be shared by the base station 2 and the other terminal. The other terminal, which is assigned the transmission permitted time, does not perform data transmission until a specified

transmission start time, and transmits data having the transmission permitted time length after the specified transmission start time (steps S33 to S36).

Therefore, there is implicit or inherent for each of the claimed features recited in Claims 16 and 19.

Accordingly, for at least the reasons discussed above, Applicants respectfully request that the rejection of Claims 10-19 under 35 U.S.C. § 112, first paragraph, be withdrawn.

The Office Action rejects Claims 10-13 under 35 U.S.C. § 102(b) as anticipated by Wej. Applicants respectfully traverse this rejection, as independent Claims 10-13 recite novel features clearly not taught or rendered obvious by the applied references.

Claim 10, for example, is directed to a communication method for a communication system including a base station and a terminal, the terminal transmitting a data as a new data to the base station, and upon receiving an NAK signal indicating a reception failure from the base station as a response to the transmission of the new data, transmitting the data as a retransmission data to the base station. The communication method includes a first step for the base station to transmit information on a value of a resource for data transmission that is used for a communication between the base station and the terminal. Further, the communication method includes a second step for the terminal to receive from the base station, information on the value of the resource for data transmission, and a third step for the terminal to transmit a new data to the base station based on the value of the resource for data transmission. The communication method also includes a fourth step for the terminal *to transmit a retransmission data to the base station regardless of the value of the resource for data transmission*, in case the new data is transmitted to the base station at the third step and the NAK signal is received from the base station as a response to the new data.

Applicants respectfully submit that Wei fails to teach all of the features recited in Claim 10. For example, Wei fails to teach or suggest a terminal transmitting a retransmission data to the base station regardless of the value of the resource for data transmission.

Instead, Wei describes a system that utilizes the Radio Link Protocol (RLP) residing above a physical layer to handle lost packets. Further, Wei describes using hybrid automatic retransmission control function (HARQ-CF) defined by the cdma2000 protocol in combination with the RLP to handle lost packets.

The system described by Wei, however, fails to automatically retransmit a piece of data from a terminal to a base station that has caused a NAK to be sent from the base station to the terminal. For example, referring to Fig. 4 of Wei et al., subpacket A is transmitted from a terminal to a base station, resulting in a NAK sent back to the terminal. However, Fig. 4 does not show *transmission of retransmission data to the base station regardless of the value of the resource for data transmission*, as recited in Claim 10.

In rebutting similar arguments presented in the previous response, pp. 8-9 of the Office Action asserts that “the value of a resource is interpreted as the bandwidth or frequency allocated to a particular access point and/or mobile station at the time of transmission ... [and] a person of ordinary skill in the art would know that a retransmission in response to a NAK would occur regardless of what channel or frequency is assigned to the mobile station ...” (emphasis added).

Thus, the Office Action concedes that, in Wei, it would be necessary for a channel or frequency to be assigned in order for a transmission data to occur, including the retransmission of data. This is in clear contrast to Claim 10, which recites that the terminal transmits retransmission data to the base station *regardless of the value of the resource for data transmission*, when a NAK signal is received from the base station as a response to the new data. Wei, on the other hand, as described at Fig. 4 and paragraphs [0057] – [0060], and

as conceded in the Office Action, requires that a channel (e.g., resource) be assigned to the mobile station each time the mobile station transmits data regardless of whether the transmission is a new data transmission or a retransmission of data. Thus, the system of Wei does not transmit retransmission data to the base station ***regardless of the value of the resource for data transmission***, because resources must be allocated to the mobile station in order for the mobile station to transmit any data.

Therefore, Applicants respectfully submit that Wei fails to teach all of the features recited in Claim 10. Claims 11-13 recite similar features to those recited in Claim 10. Accordingly, Applicants respectfully submit that Claims 10-13 patentably define over Wei.

The Office Action further rejects Claims 14-19 under 35 U.S.C. § 103(a) as unpatentable over Wei. Applicants respectfully traverse this rejection.

Claim 14 depends from Claim 10, and recites that “the retransmission data is transmitted ***after a predetermined time*** defined between the terminal and the base station has elapsed ***since reception of the NAK signal***.” Claim 17 recites similar features.

In rejecting these claims, the Office Action relies on paragraph [0115] of Wei and asserts that the reference discloses a retransmission scheme that “allows a lost encoder packet to be retransmitted without waiting for the delayed NAK”. (emphasis added) Claim 14, on the other hand, describes that the retransmission data is performed after a predetermined time has elapsed ***since reception of the NAK signal***. Thus, the time frame is based on the reception of the NAK to allow for the proper retransmission of data by the terminal. Wei fails to teach or suggest this claimed feature, as the cited portion of this reference describes performing data retransmission without receiving a NAK message, whatsoever.

Accordingly, Applicants respectfully request that the rejection of Claims 14 and 17 under 35 U.S.C. § 103.

Claim 15 depends from Claim 10, and recites that “the retransmission data is transmitted *at a coding rate lower than an initial coding rate* used in the third step”. Claim 18 recites similar features.

In rejecting Claims 15 and 18, the Office Action “takes official notice of the fact that retransmission of data at a lower data rate is well known in the art”. However, MPEP § 2144.03a states that

It is never appropriate to solely rely on ‘common knowledge’ in the art without evidentiary support in the record, as the principal evidence upon which the rejection is based. *Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697 (‘[T]he Board cannot simply reach conclusions based on its own understanding or experience-or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings.’).

The outstanding Office Action inappropriately relies on a conclusory statement that it would have been obvious to further modify Wej to retransmit data at a lower data rate “for the purpose of providing an efficient communication system”. These rejections are improper and do not include the required evidentiary support. Moreover, it is reasonable that instead of retransmitting the data at a lower data rate, various other system parameters may be changed in order to more reliably retransmit data.

Therefore, the taking of official notice in the outstanding Office Action with respect to dependent Claims 15 and 18 is traversed.

The Office Action also takes official notice that the features of Claims 16 and 19, which are discussed above, are well known by stating, “retransmission at different time zones is well known in the art”. As discussed above, however, the features recited in Claims 16 and 19 are not merely directed to retransmitting data at different time zones, as asserted in the Office Action, but instead define a process of reliably coordinating communications between a first terminal to which a NAK message was sent, and another terminal waiting to transmit new data.

Wei fails to even remotely teach or suggest such a limitation, and the features recited in dependent Claims 16 and 19 are not “well known in the art” as asserted in the Office Action.

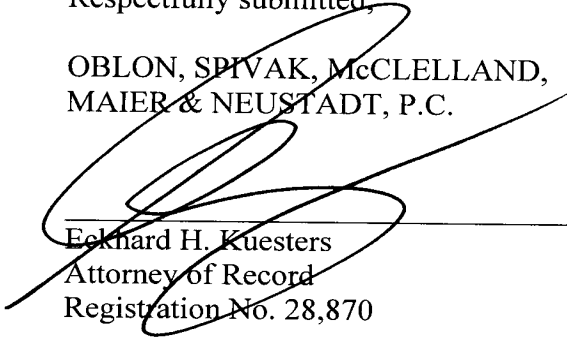
Therefore, the taking of official notice in the outstanding Office Action with respect to dependent Claims 16 and 19 is traversed.

Accordingly, Applicants respectfully request that the rejection of Claims 15-16 and 18-19 under 35 U.S.C. § 103 be withdrawn.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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